

WHAT IS CLAIMED IS:

1. A method for providing an extensible agent comprising:
receiving a request from a client;
5 determining one or more environment characteristics;
dynamically selecting at least a portion of a plurality of agent components based on the client request and the environment characteristics; and
processing the client request using the selected
10 agent components.
2. The method of Claim 1, each agent component comprising an object defined in an object-oriented programming language.
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3. The method of Claim 2 further comprising instantiating the selected agent component objects.
4. The method of Claim 1 further comprising:
20 selecting one or more characteristics of the request; and
wherein dynamically selecting at least a portion of a plurality of agent components based on the client request comprises selecting at least a portion of agent
25 components based on the selected request characteristics.
5. The method of Claim 4 further comprising storing the selected request characteristics in one of the selected agent components.
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6. The method of Claim 5, one of the selected agent components comprising embedded structured query language (SQL) operable to query a database.

5 7. The method of Claim 1, the client comprising a remote client and the client request is received through a web server.

8. The method of Claim 7 further comprising
10 communicating a web-enabled message to the remote client based on the processed request.

9. The method of Claim 2, at least a portion of the agent components comprising objects based on a common
15 parent class, the common parent class comprising component messaging logic and component locating logic.

10. The method of Claim 1, wherein at least a portion of the plurality of agent components comply with
20 Foundation for Intelligent Physical Agents (FIPA) standards.

11. The method of Claim 3 further comprising
registering each instantiated agent component object.
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12. The method of Claim 1, wherein dynamically selecting at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises:

5 automatically retrieving variable properties from a knowledgebase using the client request and the environment variables; and

 selecting at least a portion of the plurality of agent components based on the retrieved variable
10 properties.

13. The method of Claim 1, wherein dynamically selecting at least a portion of the plurality of agent components based on the client request and the
15 environment characteristics comprises selecting at least a portion of the plurality of agent components based on a JAVA properties file.

14. The method of Claim 1, the selected portion of
20 the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled environment.

15. The method of Claim 1 further comprising:
25 migrating the plurality of agent components to an environment prior to receiving the request from the client; and

 wherein processing the client request using the selected agent components comprises automatically
30 processing the client request using the selected agent components.

16. Software for providing an extensible agent operable to:

receive a request from a client;

determine one or more environment characteristics;

5 dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics; and

process the client request using the selected agent components.

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17. The software of Claim 16, each agent component comprising an object defined in an object-oriented programming language.

15 18. The software of Claim 17 further operable to instantiate the selected agent component objects.

19. The software of Claim 16 further operable to select one or more characteristics of the request and
20 wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request comprises the software operable to select at least a portion of agent components based on the selected request characteristics.

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20. The software of Claim 19 further operable to store the selected request characteristics in one of the selected agent components.

21. The software of Claim 20, one of the selected agent components comprising embedded structured query language (SQL) operable to query a database.

5 22. The software of Claim 16, the client comprising a remote client and wherein the client request is received through a web server.

10 23. The software of Claim 22 further operable to communicate a web-enabled message to the remote client based on the processed request.

15 24. The software of Claim 17, at least a portion of the agent components comprising objects based on a common parent class, the common parent class comprising component messaging and component location logic.

20 25. The software of Claim 16, wherein at least a portion of the plurality of agent components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

25 26. The software of Claim 18 further operable to register each instantiated agent component object.

27. The software of Claim 16, wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises the software operable to:

retrieve variable properties from a knowledgebase using the client request and the environment variables; and

select at least a portion of the plurality of agent components based on the retrieved variable properties.

28. The software of Claim 16, wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises the software operable to select at least a portion of the plurality of agent components based on a JAVA properties file.

29. The software of Claim 16, the selected portion of the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled environment.

30. The software of Claim 16 further operable to:
migrate the plurality of agent components to an
environment prior to receiving the request from the
client; and

5 wherein the software operable to process the client
request using the selected agent components comprises the
software operable to automatically process the client
request using the selected agent components.

31. A server comprising:

a memory operable to store a database and a
knowledgebase, the knowledgebase comprising a plurality
of component selection patterns; and

5 one or more processors collectively operable to:

receive a request from a client;

determine one or more environment
characteristics;

10 dynamically select at least a portion of a
plurality of agent components based on one of the
plurality of component selection patterns, the pattern
selected based on the client request and the environment
characteristics; and

15 access data in the database using the selected
agent components.

32. The server of Claim 31, each agent component
comprising an object defined in an object-oriented
programming language.

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33. The server of Claim 32, the processors further
operable to instantiate the selected agent component
objects.

25 34. The server of Claim 31, the processors further
operable to select one or more characteristics of the
request and wherein the processors operable to
dynamically select at least a portion of a plurality of
agent components based on the client request comprise the
30 processors operable to select at least a portion of agent
components based on the selected request characteristics.

35. The server of Claim 34, the processors further operable to store the selected request characteristics in one of the selected agent components.

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36. The server of Claim 35, wherein accessing data in the database using the selected agent components is performed by one of the selected agent components comprising embedded structured query language (SQL).

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37. The server of Claim 31, the client comprising a remote client and wherein the client request is received through a web server.

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38. The server of Claim 37, the processors further operable to communicate a web-enabled message to the remote client based on the processed request.

39. The server of Claim 32, at least a portion of the agent components comprising objects based on a common parent class, the common parent class comprising component messaging and component location logic.

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40. The server of Claim 31, wherein at least a portion of the plurality of agent components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

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41. The server of Claim 33, the processors further operable to register each instantiated agent component object.

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42. The server of Claim 31, wherein the processors operable to dynamically select at least a portion of a plurality of agent components based on the client request
5 and the environment characteristics comprise the processors operable to:

retrieve variable properties from the knowledgebase using the client request and the environment variables;
selecting one of the component selection patterns
10 based on the retrieved variable properties; and
select at least a portion of the plurality of agent components using the component selection pattern.

43. The server of Claim 31, wherein the processors
15 operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprise the processors operable to select at least a portion of the plurality of agent components based on a JAVA properties
20 file.

44. The server of Claim 31, the selected portion of the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled
25 environment.

45. The server of Claim 36, the processors further operable to:

migrate the plurality of agent components to an environment prior to receiving the request from the
5 client; and

wherein the processors operable to process the client request using the selected agent components comprise the processors operable to automatically process the client request using the selected agent components.
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